

## **AGENDA ITEM III B**

### **PROPOSED ACADEMIC PROGRAM**

#### **MCNEESE STATE UNIVERSITY**

#### **B.S. IN ENGINEERING TECHNOLOGY**

##### **BACKGROUND INFORMATION**

Last month, the Board of Regents approved a request from McNeese State University to consolidate various associate-level degrees in technology into a single A.S. program in Engineering Technology. This subsequent proposal from McNeese requests permission to similarly convert and upgrade the B.S. in Electrical/Electronics Technology program into a B.S. in Engineering Technology with multiple concentrations. A critical facet of this proposal is the “2+2” design of the curriculum, which will promote smooth articulation with and transition from the existing A.S. program to the proposed B.S. program.

It should be noted that this proposal has been previously reviewed and approved by Dr. William Clark, a consultant for the Technology Education Committee of the Accrediting Board for Engineering and Technology (ABET), the Regents’ designated accreditation body for Engineering Technology degrees.

##### **STAFF ANALYSIS**

#### **1. Objective**

The proposed B.S. program in Electronics Technology is designed to prepare students for successful entry into advanced skills engineering and technology employment in specific concentration areas of Electronics, Instrumentation, and Process Plant. Once approved, the proposed program will replace the existing B.S. in Electronics/Electrical Technology.

#### **2. Need**

The proposal evidences that manpower needs for baccalaureate engineering technology graduates in the Greater Lake Charles area are large and growing. The southwest Louisiana industrial corridor which McNeese State University serves is the second largest in the state. Industrial representatives have voiced their strong support for the proposed new program and have played an active part in the proposed program design. Technology studies is a critical component of the University’s role, scope, and mission, and the proposed program will help McNeese fulfill its responsibility to provide appropriate educational opportunities for its service population.

It should be noted that related programs are already offered at Grambling State University, Louisiana Tech University, Northwestern State University, and Southern University-Baton Rouge; however, these programs are solely Electrical Engineering Technology degrees without the added component of

Instrumentation and Process Plant Engineering Technology.

### **3. Curriculum**

Students may elect to enroll in the program either as entering freshman or after completion of an A.S. degree in Engineering Technology; all credits previously earned in the A.S. in Engineering Technology will count toward the proposed B.S. degree.

The proposed program of study will require the completion of 124-125 semester hours, divided as follows:

General Education	41 hours
Supporting Math, etc.	14 hours
Technology Core	30 hours
Technology Electives	20 hours
<u>Concentration Electives</u>	<u>19-20 hours</u>
 Total	 124-125 hours

The proposed curriculum is designed to meet accreditation requirements of the Accrediting Board for Engineering and Technology (ABET). Concentrations will be made available in all subdiscipline areas currently offered by the new A.S. in Engineering Technology program (i.e., Electronics, Instrumentation, and Process Plant).

### **4. Students**

The Department of Technology has averaged about 350 enrollees and seventy graduates per year over the past five years (including all previous associate-level Technology and the existing B.S. in Electrical/Electronics Technology programs); numbers of B.S. graduates have generally been around thirteen per year. It is expected that these numbers will remain the same initially and increase moderately in the nearer future upon approval of the proposed program.

Specifically, the University projects B.S. enrollees to increase from 83 in Year One to 115 by Year Five and numbers of graduates to increase from 25 in Year One to 40 by Year Five. The higher numbers of enrollees and graduates is expected in large part due to the greater marketability of the proposed new degree.

### **5. Faculty**

The Department of Technology currently employs ten full-time faculty, seven of which possess the necessary academic credentials required of ABET to teach in the proposed B.S. program. The University believes its existing faculty are more than adequate to assume program responsibilities without additional positions.

### **6. Library and Other Informational Resources**

McNeese states that current library/informational resources are adequate to implement the proposed B.S. program; the ABET-TEC consultant agreed with this assessment.

## **7. Facilities and Equipment**

McNeese states that current facilities/equipment are adequate to implement the proposed B.S. program; the ABET-TEC consultant agreed with this assessment.

## **8. Administration**

The proposed B.S. program will be administered through the Department of Technology within the College of Engineering and Technology.

## **9. Accreditation**

The proposed program is designed to meet accreditation standards of the Accrediting Board for Engineering and Technology. The University expects to host an initial ABET accreditation visit in Fall, 2002 and receive an official decision from ABET in August, 2003.

## **10. Settlement Agreement Issues**

The desegregation Settlement Agreement does not provide for the establishment of a similar or related program at a predominantly black institution of higher education in Louisiana.

## **11. Costs**

McNeese states that all monies currently used to fund the existing B.S. program along with a portion of cost-saving resulting from previous termination of select associate degrees will be redirected to afford the new B.S. program in Engineering Technology. The current departmental budget is \$580 K; the anticipated departmental budget for next year will be approximately \$518K and will remain so for the next two years thereafter.

## **STAFF SUMMARY**

The proposed B.S. in Engineering Technology is a logical development upon Regents' approval of McNeese's A.S. program in Engineering Technology last month. If this proposal is approved, McNeese will have elevated all of its former Technology programs to Engineering Technology degrees. This curricular restructuring should benefit both students and the community alike. McNeese's plans to build the proposed B.S. program upon the new A.S. degree using a "2+2" design is both an efficient and effective method to offer the highest quality of education to the greatest number of students.

The staff supports McNeese's request to establish a new B.S. program in Engineering Technology. The University has been pro-active in formulating this request, engaging the services of an eminent external expert to review their proposal and make recommendations for needed changes to assure accreditation through the ABET. The University has wisely implemented the consultant's suggestions. The consolidated program is appropriate to the University's mission, program need appears justified, the curriculum is well-designed, and necessary resources seem to be readily available. As provided by Academic Affairs Policy 2.13 - Professional Program Accreditation, the University must obtain

appropriate accreditation (ABET) for the program within three years of program implementation.

### ***STAFF RECOMMENDATION***

***The staff recommends that the Academic and Student Affairs Committee grant approval for the request from McNeese State University to:***

- 1. Establish the B.S. program in Engineering Technology program (CIP Code 15.9999) with concentrations in Electronics, Instrumentation, and Process Plant; and***
- 2. Terminate the B.S. program in Electrical/Electronics Technology (CIP Code 15.0303), effective immediately.***

***In accordance with Academic Affairs Policy 2.13 - Professional Program Accreditation, the University shall obtain accreditation from the Accrediting Board of Engineering and Technology for the B.S. program in Engineering Technology by December 15, 2003.***